



<110> HAYSTEAD, TIMOTHY A

<120> SMOOTH MUSCLE MYOSIN PHOSPHATASE ASSOCIATED KINASE

<130> 1579-647

<140> 10/083,641

<141> 2002-02-27

<150> 60/271,436

<151> 2001-02-27

<160> 17

<170> PatentIn Ver. 2.1

<210> 1

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Endogenous kinase
copurifies with SMPP-1M

<400> 1

Lys	Lys	Lys	Arg	Gln	Ser	Arg	Arg	Ser	Thr	Gln	Gly	Val	Thr	Leu
1				5					10					15

<210> 2

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: human pDAPK3

<400> 2

Met	Gly	Glu	Glu	Leu	Gly	Ser	Gly	Gln	Phe	Ala	Ile	Val
1				5					10			

<210> 3

<211> 320

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: ZIP Kinase

<400> 3

Met	Ser	Thr	Phe	Arg	Gln	Glu	Asp	Val	Glu	Asp	His	Tyr	Glu	Met	Gly
1				5					10					15	

Glu	Glu	Leu	Gly	Ser	Gly	Gln	Phe	Ala	Ile	Val	Arg	Lys	Cys	Arg	Gln	20	25	30
Lys	Gly	Thr	Gly	Lys	Glu	Tyr	Ala	Ala	Lys	Phe	Ile	Lys	Lys	Arg	Arg	35	40	45
Leu	Pro	Ser	Ser	Arg	Arg	Gly	Val	Ser	Arg	Glu	Glu	Ile	Glu	Arg	Glu	50	55	60
Val	Asn	Ile	Leu	Arg	Glu	Ile	Arg	His	Pro	Asn	Ile	Ile	Thr	Leu	His	65	70	75
Asp	Ile	Phe	Glu	Asn	Lys	Thr	Asp	Val	Val	Leu	Ile	Leu	Glu	Leu	Val	85	90	95
Ser	Gly	Gly	Glu	Leu	Phe	Asp	Phe	Leu	Ala	Glu	Lys	Glu	Ser	Leu	Thr	100	105	110
Glu	Asp	Glu	Ala	Thr	Gln	Phe	Leu	Lys	Gln	Ile	Leu	Asp	Gly	Val	His	115	120	125
Tyr	Leu	His	Ser	Lys	Arg	Ile	Ala	His	Phe	Asp	Leu	Lys	Pro	Glu	Asn	130	135	140
Ile	Met	Leu	Leu	Asp	Lys	Asn	Val	Pro	Asn	Pro	Arg	Ile	Lys	Leu	Ile	145	150	155
Asp	Phe	Gly	Ile	Ala	His	Lys	Ile	Glu	Ala	Gly	Asn	Glu	Phe	Lys	Asn	165	170	175
Ile	Phe	Gly	Thr	Pro	Glu	Phe	Val	Ala	Pro	Glu	Ile	Val	Asn	Tyr	Glu	180	185	190
Pro	Leu	Gly	Leu	Glu	Ala	Asp	Met	Trp	Ser	Ile	Gly	Val	Ile	Thr	Tyr	195	200	205
Ile	Leu	Leu	Ser	Gly	Ala	Ser	Pro	Phe	Leu	Gly	Glu	Thr	Lys	Gln	Glu	210	215	220
Thr	Leu	Thr	Asn	Ile	Ser	Ala	Val	Asn	Tyr	Asp	Phe	Asp	Glu	Glu	Tyr	225	230	235
Phe	Ser	Ser	Thr	Ser	Glu	Leu	Ala	Lys	Asp	Phe	Ile	Arg	Arg	Leu	Leu	245	250	255
Val	Lys	Asp	Pro	Lys	Arg	Arg	Met	Thr	Ile	Ala	Gln	Ser	Leu	Glu	His	260	265	270
Ser	Trp	Ile	Lys	Val	Arg	Arg	Arg	Glu	Asp	Gly	Ala	Arg	Lys	Pro	Glu	275	280	285
Arg	Arg	Arg	Leu	Arg	Ala	Ala	Arg	Leu	Arg	Glu	Tyr	Ser	Leu	Lys	Ser	290	295	300
His	Ser	Ser	Met	Pro	Arg	Asn	Thr	Ser	Tyr	Ala	Ser	Phe	Glu	Arg	Phe	305	310	315
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<210> 4
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: rat DAP-like kinase

<220>
<221> Unsure
<222> (6), (10)
<223> Xaa can be any amino acid

<400> 4
Met Leu Leu Asp Lys Xaa Ile Phe Xaa Arg Pro Ile Gln
1 5 10

<210> 5
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: D-glycerate dehydrogenase

<220>
<221> Unsure
<222> (8), (10), (11) and (13)
<223> Xaa can be any amino acid

<400> 5
Met Thr Ile Ala Gln Asn Leu Xaa Tyr Xaa Xaa Ile Xaa
1 5 10

<210> 6
<211> 1093
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Putative nucleotide
sequence of smooth muscle MYPT-Kinase

<220>
<221> Unsure
<222> (2), (7), (37), (39), (1056), (1081) and (1092)
<223> N can be A, C, G or T

<400> 6
gntatgnata tcggtttaat cggccggagc tcgcccncng ggcagctgga ctccctctca 60
gacctcttc ttctcgccc tcagcacggg attaacctca cttgactgtt cttgggtccc 120

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cggtgccggg ccagcgtcct ctccctcaag gcaatcccca agtgtctgtc atgaggctct 180
ttgggcagtt ctgttggtgt gggaaacctg ggaacagatg cacagaggct ggggtacaga 240
gtcctgcctt cctctgggtc tgcagcgctt agctgttctt tccccacag cggccagttc 300
gccatcgtgc gcaagtgcc aacagaagggc accggcatgg agtacgcggc caagttcata 360
aagaagcggc gctgccgtc cagccggcgc ggtgtgagcc gtgaggagat cgagcgcgag 420
gtgagcatcc tgcgcgagat ccgccacccc aacatcatca cgctgcacga tgtgttcgag 480
aacaagacag atgtgggtgct gatcttggag ctgggtgtccg gcggcgaaact ttctgacttt 540
ctggctgaga aggatcactg acagaggatg aggccacgca gttcctcaag cagatcctgg 600
acggtgtcca ctacctgcac tccaagcgca tcgcgcactt tgacctgaag ccggagaaca 660
tcatgttgct ggacaagcat gcagccagcc cagcattaa gctcatcgac ttggcagtcg 720
cgacaggat cgaggccggt agcgagttca agaactctt tggcacgcca gagttcgtcg 780
gtgaggggca ggtgtgggca ccaccgata gggtagattt tgcacggcct tggcctgacc 840
tgctcaaca atcctgtctt ccacagcccc tgagattgta aactatgaac cacttggttt 900
ggaagctgat atgtggagca tcggcgatc cactacatc ctgtgagtgc ctgagatggg 960
caggggcctc agactgtacc tgctagaggc ccagggatca gggctggcac ctctgcaaac 1020
tgcaaacact ggggctgaga gatgtccctg ggaacnctgg atatgcttgg gccccaccaa 1080
ngtaggacca tnc 1093

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<210> 7

<211> 34

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Deduced amino acid sequence of rat
aorta smooth muscle MYPT-kinase

<220>

<221> Unsure

<222> (1), (3) and (13)

<223> Xaa can be any amino acid

<400> 7

```

Xaa Met Xaa Ile Gly Leu Ile Gly Arg Ser Ser Pro Xaa Gly Gln Leu
  1             5             10             15

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Asp Ser Leu Ser Asp Leu Leu Leu Ser Arg Pro Gln His Gly Ile Asn
          20             25             30

```

Leu Thr

<210> 8

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Deduced amino acid sequence of rat
aorta smooth muscle MYPT-kinase

<400> 8

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Leu Phe Leu Gly Pro Arg Cys Arg Ala Ser Val Leu Ser Leu Lys Ala
  1             5             10             15

```

Ile Pro Lys Cys Leu Ser
20

<210> 9

<211> 125

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Deduced amino acid sequence of rat
aorta smooth muscle MYPT-kinase

<400> 9

Gly Ser Leu Gly Ser Ser Val Val Val Gly Asn Leu Gly Thr Asp Ala
1 5 10 15

Gln Arg Leu Gly Tyr Arg Val Leu Pro Ser Ser Gly Ser Ala Ala Leu
20 25 30

Ser Cys Ser Phe Pro His Ser Gly Phe Ala Ile Val Arg Lys Cys Lys
35 40 45

Gly Thr Gly Met Glu Tyr Ala Ala Lys Phe Ile Lys Lys Arg Arg Leu
50 55 60

Pro Ser Ser Arg Arg Gly Val Ser Arg Glu Glu Ile Glu Arg Glu Val
65 70 75 80

Ser Ile Leu Arg Glu Ile Arg His Pro Asn Ile Ile Thr Leu His Asp
85 90 95

Val Phe Glu Asn Lys Thr Asp Val Val Leu Ile Leu Glu Leu Val Ser
100 105 110

Gly Gly Glu Leu Phe Asp Phe Leu Ala Glu Lys Asp His
115 120 125

<210> 10

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Deduced amino
acid sequence of rat aorta smooth muscle
MYPT-kinase

<400> 10

Gln Arg Met Arg Pro Arg Ser Ser Ser Ser Arg Ser Trp Thr Val Ser
1 5 10 15

Thr Thr Cys Thr Pro Ser Ala Ser Arg Thr Leu Thr
20 25

<210> 11
<211> 55
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Deduced amino
acid sequence of rat aorta smooth muscle
MYPT-kinase

<400> 11
Ser Arg Arg Thr Ser Cys Cys Trp Thr Ser Met Gln Pro Ala His Ala
1 5 10 15
Leu Ser Ser Ser Thr Leu Ala Ser Arg Thr Gly Ser Arg Pro Val Ala
20 25 30
Ser Ser Arg Thr Ser Leu Ala Arg Gln Ser Ser Ser Val Arg Gly Arg
35 40 45
Cys Gly His His Pro Ile Gly
50 55

<210> 12
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Deduced amino
acid sequence of rat aorta smooth muscle
MYPT-kinase

<400> 12
Ile Leu His Gly Leu Gly Leu Thr Cys Leu Asn Asn Pro Val Phe His
1 5 10 15
Ser Pro

<210> 13
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Deduced amino
acid sequence of rat aorta smooth muscle
MYPT-kinase

<400> 13
Asp Cys Lys Leu
1

<210> 14
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Deduced amino
acid sequence of rat aorta smooth muscle
MYPT-kinase

<400> 14
Thr Thr Trp Leu Gly Ser
1 5

<210> 15
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Deduced amino
acid sequence of rat aorta smooth muscle
MYPT-kinase

<400> 15
Tyr Val Glu His Arg Arg His His Leu His Pro Val Ser Ala
1 5 10

<210> 16
<211> 27
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Deduced amino
acid sequence of rat aorta smooth muscle
MYPT-kinase

<400> 16
Asp Gly Gln Gly Pro Gln Thr Val Pro Ala Arg Gly Pro Gly Ile Arg
1 5 10 15

Ala Gly Thr Ser Ala Asn Cys Lys His Trp Gly
20 25

<210> 17
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Deduced amino
acid sequence of rat aorta smooth muscle
MYPT-kinase

<220>

<221> Unsure

<222> (15), (17)

<223> Xaa can be any amino acid

<400> 17

Glu	Met	Ser	Leu	Gly	Thr	Leu	Asp	Met	Pro	Gly	Pro	His	Gln	Xaa	Arg
1				5					10					15	

Thr Xaa